Academic Engagement: Taking the Pulse of Business Students

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Completion gaps continue to challenge higher education institutions. Research has identified causal models and variables contributing to persistence. However, the constructs of work engagement have generally not been applied to academic engagement or connected to higher education completion. This study administered the Utrecht Work Engagement Scale for Students (UWES-S) to business majors at a large, regional, open-admission university. Findings confirmed expected influences on engagement including fewer working hours, higher GPA, and higher satisfaction with the university. Gender, race, marital status, first-generation status, and course modality had no impact. Students with children were more engaged; barriers to completion, specifically financial issues, lack of support, and personal and family reasons did not impact engagement.

Keywords: undergraduate mentoring, research mentoring, facilitating beyond undergraduate graduation, facilitating post-baccalaureate clinical/medical degrees

INTRODUCTION

The benefits of higher education for individuals and society are well-established. They include networking, personal development, higher earnings, lifelong learning, job security, career advancement, civic engagement, healthier lifestyles, better relationships, and improved parenting (Gallup & Lumina Foundation, 2024; Ma & Pender, 2023; McMahon, 2009; Scott, 2024). Despite these advantages, higher education continues to be criticized for its value, cost and incurred debt (Drozdowski, 2024; Gallup & Lumina Foundation, 2024), liberal curricular biases, and completion failures (Scott, 2024). This has led to increasing interest in alternative pathways such as industry certifications that increase salary and job market competitiveness and do so relatively quickly (Drozdowski, 2024; Gallup & Lumina Foundation, 2024). Students also seek flexible learning opportunities that allow them to study and work concurrently (Scott, 2024).

An ongoing concern with higher education is student completion. Although higher education has become more accessible and inclusive, with increasing enrollments from diverse populations (American Council on Education, 2024) and worldwide initiatives aimed at democratization (Blessinger, 2015), about

a third of enrolled students consider dropping out (Gallup & Lumina Foundation, 2024) with an overall 6-year completion rate in the US of approximately 62% and considerable completion gaps depending on institutional type, gender, ethnicity, socioeconomic status, and other factors (American Council on Education, 2024; Custer, 2023; Nietzel, 2023). Mental health and emotional stress are barriers to enrollment and cited as reasons for stopping out with female students affected at twice the rate of males (Gallup & Lumina Foundation, 2024).

These concerns have led to national priorities for higher education institutions, such as those of the Office for Students in the UK that 80% of full-time students should advance to the second year, 75% complete their programs, and 60% progress to further study or professional work within 15 months after graduation (Custer, 2023). In the US, where higher education is more decentralized, non-profit organizations have called for changes that encourage statewide completion goals and performance-based funding reforms that emphasize outcomes over enrollments intending to increase social and economic mobility (Complete College America, 2023). Well-known and extensively researched retention theories have identified factors leading to persistence for various student populations (Astin, 1984, 1999; Bean & Metzner, 1985; Kirby, 2015; Tinto, 1975, 1986, 1987, 1993). Academic engagement is a central theme, conceptualized by Astin (1984, 1999) as involvement, or active engagement and participation, which is correlated to academic performance, and by Tinto (1975, 1986, 1987, 1993) as intellectual and social integration, leading to persistence.

The current study seeks to increase understanding of academic engagement by administering the Utrecht Work Engagement Scale for Students (UWES–S) (Schaufeli et al., 2002a, 2002b). While the concept of work engagement and its antecedents has been extensively researched, the constructs of work engagement have generally not been applied to academic engagement or connected to higher education completion. Work engagement is a positive, fulfilling state of mind concerning work activities, comprised of *vigor*, *dedication*, and *absorption* (Schaufeli et al., 2002a, 2002b, 2006, 2019). In the case of students, *vigor* consists of effort and persistence; *dedication* entails involvement and recognition of the significance of learning; and *absorption* comprises intense concentration and focus while studying. This research aims to examine the extent to which undergraduate students in business courses report these aspects of engagement and how engagement levels vary by student demographic variables. The study extends current research on student engagement and success.

LITERATURE REVIEW

Worker engagement is demonstrated by three behaviors: affective (creating connections with supervisors and co-workers), cognitive (gathering information, questioning, problem-solving), and physical (exhibiting active physical movement) (Kahn, 1990). These behaviors depend on psychological availability, meaningfulness, and psychological safety. The discretionary effort that workers exert is founded on the belief that they can invest physically, cognitively, and psychologically in the workplace; contribute meaningfully to organizational success; form satisfying relationships with work associates; and have sufficient resources to accomplish their tasks.

This work engagement concept directed away from extrinsic motivational approaches such as pay, to relationships with co-workers, and partnerships between workers and supervisors to engage employees and improve organizations (Rheem, 2018). Somewhat similarly, retention research and resulting theories and models, has identified ways in which higher education institutions can create environments where students feel welcomed and supported, that facilitate relationships with their peers and professors, and that encourage students to engage in the academic and social realms of the university (Andrade, 2023; Astin, 1984, 1999; Bean & Metzner, 1985; Kirby, 2015; Tinto, 1975, 1986, 1987, 1993).

Regarding academic engagement, a study of graduating students and alumni found that those indicating they would not attend the same university, or any university given the choice again scored statistically significantly lower on questions asking about the cross-cutting skills they had developed as a result of higher education such as communication, critical thinking, leadership, and appreciation for diverse perspectives (Andrade et al., 2020). This indicates the centrality of academic engagement, and recognition

of the skills developed due to the higher education experience. In particular, it supports current movements toward student learning outcomes identification and assessment to document learning gains not only for purposes of compliance and accountability, but to prepare students with employer-valued skills and enable them to recognize the development of these skills (Association of American Colleges & Universities, 2008, 2011, 2013; Azevedo et al., 2012; Bayerlein & Timpson, 2017; Finley, 2021, 2023; Hart Research Associates, 2015, 2018; Pratt et al., 2014; Ullah et al., 2018).

Constructs related to academic engagement, although similar, have distinct characteristics. Astin's (1984, 1999) conceptualization of academic involvement focuses on behaviors such as faculty and peer interaction, mentoring, and cooperative learning, and teamwork. Tinto's model (1975, 1986, 1987, 1993) focuses on causality or the interconnections of pre-entry characteristics and initial goal commitment, academic and social integration, and commitment to graduate. Other models similarly focus on interrelations among variables (Kirby, 2015), academic performance, and intellectual development (Bean & Metzner, 1985; Kirby, 2015; Spady, 1971). Certainly, emphasis on high impact educational practices (HIPs), or activities associated with deep learning, often measured by the National Survey of Student Engagement (NSSE), have been correlated with aspects of academic engagement. These include academic challenge, active and collaborative learning, student-faculty interaction, and a supportive campus environment, along with learning outcomes such as critical thinking, written communication, and quantitative reasoning (Finley & McNair, 2013; Finley, 2021, 2023; Finley et al., 2021; Kuh et al., 2017). These activities and outcomes reflect key components of retention frameworks.

The NSSE consists of 10 engagement indicators, specifically, higher-order learning, reflective and integrative learning, learning strategies, quantitative reasoning, learning with peers, discussions with diverse others, experiences with faculty, effective teaching practices, quality of interactions, and supportive environments; its focus is on the self-reported curricular and co-curricular experiences of first- and senior-year students (Kuh, 2010). The UWES-S measures the dimensions of engagement from a psychological standpoint, specifically students' approaches to their studies in terms of vigor, dedication, and absorption. As with work engagement, it has the potential to predict outcomes such as performance and turnover (retention) intentions, aiding institutions in understanding the drivers of engagement and identifying appropriate interventions. The UWES-S has been validated in a variety of contexts (Carmona-Halty et al., 2019; Loscalzo & Giannini, 2019; López et al., 2021; Rastogi et al., 2018; Tsubakita et al., 2017; Wickramasinghe et al., 2018). Other than validation studies, however, research has not explored student engagement using the UWES-S and possible implications for student success and completion. Although research in this area is limited and this is an exploratory study, the following hypotheses were tested.

1. Level of engagement (vigour, dedication, and absorption) among undergraduate business students will be average or higher.
2. No differences in engagement will be found based on gender or race.
3. No difference will be found based on first-generation status, marital status, or whether the student has children.
4. Students working full time will be less engaged than students working part time.
5. Full-time students will be more engaged than part-time students.
6. Students with GPAs over 2.5 will report greater levels of engagement than those below 2.5
7. Students enrolled in 3 or more credits of online courses will be engaged at the same level as those taking less than 3.
8. Student satisfaction with the university will correlate with high engagement.
9. Students facing barriers to completion will report lower levels of engagement.
10. Students that plan to complete their degree at the university and have no imminent plans to leave will have higher engagement.

METHODS

The context for this study is an open admission university in the US with nearly 47,000 students. Participants were enrolled in four introductory statistics courses for business majors. Business is one of the

largest areas of study at the university with approximately 6,000 undergraduate students, making it the state's largest business program. Gender representation at the university is roughly equal; 41% are first-generation students, 18% are age 25 or older, and 19% are students of color. The dominant ethnicity groups are White at 77% and Hispanic at 13%; 83% of enrolled students work with 28% working more than 31 hours a week; 37% are married or in a partnership with 14% supporting at least one child (Utah Valley University, 2024a, 2024b).

The university has sought to increase student retention through strategies identified in its completion plan, such as implementing orientation and first-year experience programming, removing barriers related to finances and external responsibilities, and establishing academic and social integration initiatives (Utah Valley University Student Affairs Priorities, 2024b). The university's persistence rate in 2022, measured by first-time full-time students returning to school for their second year was 68% (Data USA, 2022), increasing to 70% in 2024 with a completion rate of 45% (Utah Valley University, 2024c).

Participants

The sample consisted of 346 US undergraduate university students (64.7% male and 34.7% female). The students were studying various business fields. The project was approved by the university's research ethics committee and all participants signed an informed consent form.

Instrument

The Utrecht Work Engagement Scale (UWES) is a widely used to assess work engagement (Schaufeli et al., 2002b). The UWES–9S is a nine–item self–report scale, reduced from the original 17 items, and grouped into three subscales with three items each: vigor (VI), dedication (DE), and absorption (AB) (Schaufeli et al., 2006) (See Table 1). All items are scored on a seven–point rating scale ranging from 0 (never) to 6 (always). Research on academic engagement using the Utrecht Work Engagement Scale for Students (UWES–S) has been validated for use with undergraduate university students (Carmona-Halty et al., 2019; Loscalzo & Giannini, 2019; López et al., 2021; Rastogi et al., 2018; Tsubakita et al., 2017; Schaufeli et al., 2002a, 2002b; Wickramasinghe et al., 2018). The latter scale was used for this study.

TABLE 1
UWES-S SCALE

VI (1) When I'm doing my work as a student, I feel bursting with energy.
VI (2) I feel energetic and capable when I'm studying or going to class.
DE (3) I am enthusiastic about my studies.
DE (4) My studies inspire me.
VI (5) When I get up in the morning, I feel like going to class.
AB (6) I feel happy when I am studying intensely.
DE (7) I am proud of my studies.
AB (8) I am immersed in my studies.
AB (9) I get carried away when I am studying.

Four additional questions were added to determine students' intentions to graduate and possible barriers.

I am confident that I will complete my degree at this university.

I plan to stay at this university until I complete my degree.

What, if anything, would prevent you from completing your degree at this university? (Check all that apply)

- Financial issues
- Academic challenges
- Lack of support/resources

- Personal/family reasons
- Lack of engagement or connection with the university
- Other (please specify)

I am satisfied with my overall experience at this university.

RESULTS

The following tables provide the results of the statistical analyses. Table 2 shows the overall results on each subscale for participants.

TABLE 2
SUBSCALE RESULTS

DESCRIPTIVES			
	Vigor	**Dedication**	**Absorption**
N	341	341	341
Mean	12.3	15.5	12.7
Median	13.0	16.0	13.0
Standard deviation	3.80	3.24	3.49
IQR	5.00	4.00	5.00
Minimum	3.00	3.00	3.00
Maximum	21.0	21.0	21.0

Planning to complete your degree, staying until graduation, and being satisfied with the degree are significantly related to student engagement (See Table 3).

TABLE 3
RACE

MODEL FIT MEASURES

Model	R	R^2	Adjusted R^2	RMSE	Overall Model Test			
					F	**df1**	**df2**	**p**
1	0.143	0.0205	-0.00305	9.19	0.871	8	332	0.541

Model Coefficients - UTotal

Predictor	Estimate	SE	t	p
Intercept	39.738	2.44	16.2870	<.001
Race_1	0.523	2.40	0.2179	0.828
Race_2	5.755	4.23	1.3605	0.175

MODEL FIT MEASURES

Model	R	R²	Adjusted R²	RMSE	Overall Model Test			
					F	df1	df2	p
Race_3	1.630	2.11	0.7733	0.440				
Race_4	1.499	2.79	0.5381	0.591				
Race_5	-0.927	5.41	-0.1716	0.864				
Race_6	0.995	5.55	0.1792	0.858				
Race_7	-17.738	9.63	-1.8423	0.066				
Race_9	-0.499	6.71	-0.0744	0.941				

Only academic challenges are related to student engagement—surprisingly, lack of support/resources, personal/family reasons, and even financial issues do not significantly impact student engagement (See Table 4).

TABLE 4
COMPLETION INTENTION AND SATISFACTION

MODEL FIT MEASURES

Model	R	R²	Adjusted R²	RMSE	Overall Model Test			
					F	df1	df2	p
1	0.382	0.146	0.138	8.58	19.1	3	337	< .001

MODEL COEFFICIENTS - UTOTAL

Predictor	Estimate	SE	t	p
Intercept	21.21	3.452	6.14	< .001
I will complete my degree at this university.	2.18	0.611	3.57	< .001
I plan to stay	-1.48	0.546	-2.71	0.007
I am satisfied	2.44	0.461	5.30	< .001

Having children increases student engagement as does being first generation. Being married does not impact student engagement but having more employment decreases student engagement. (See Table 5).

TABLE 5
CHALLENGES

MODEL FIT MEASURES

Model	R	R²	Adjusted R²	RMSE	Overall Model Test			
					F	df1	df2	p
1	0.193	0.0373	0.0258	9.11	3.25	4	336	0.012

MODEL COEFFICIENTS - UTOTAL

Predictor	Estimate	SE	t	p
Intercept	41.767	0.867	48.181	< .001
Financial Issues	-0.357	1.004	-0.355	0.723
Academic Challenges	-4.234	1.271	-3.331	< .001
Lack of support/resources	1.593	1.463	1.088	0.277
Personal/family reasons	-1.482	1.052	-1.409	0.160

Higher grade point average (GPA) indicates greater student engagement, but being part/full time, the number of credit hours and being off/online does not impact student engagement (See Table 6).

TABLE 6
DEMOGRAPHICS AND EMPLOYMENT

MODEL FIT MEASURES

Model	R	R²	Adjusted R²	RMSE	Overall Model Test			
					F	df1	df2	p
1	0.449	0.202	0.185	8.30	12.0	7	333	< .001

MODEL COEFFICIENTS – U TOTAL

Predictor	Estimate	SE	t	p	Stand. Estimate
Intercept [a]	32.68656	4.295	7.61	< .001	
I will complete my degree at this university.	2.09405	0.603	3.47	< .001	0.229
I plan to stay	-1.55516	0.536	-2.90	0.004	-0.183
I am satisfied	2.59878	0.452	5.74	< .001	0.311

MODEL FIT MEASURES

Model	R	R²	Adjusted R²	RMSE	F	df1	df2	p
Children:								
No – Yes				-6.11318	2.596	-2.36	0.019	-0.657
Marital Status								
Married – Single				-0.00107	1.245	-8.58e−4	0.999	-1.15e−4
First Generation								
No – Yes				-3.69312	1.293	-2.86	0.005	-0.397
Job				-0.71822	0.349	-2.06	0.041	-0.103

[a] Represents reference level

TABLE 7
GRADES, ENROLLMENT STATUS, CREDIT HOURS, AND MODALITY

MODEL FIT MEASURES

Model	R	R²	Adjusted R²	RMSE	Overall Model Test			
					F	df1	df2	p
1	0.265	0.0701	0.0534	8.95	4.20	6	334	< .001

MODEL COEFFICIENTS - UTOTAL

Predictor	Estimate	SE	t	p
Intercept [a]	44.5370	7.058	6.3100	< .001
Full_Part_time	1.2703	2.555	0.4972	0.619
Credit_Hours	-0.1651	1.652	-0.0999	0.920
Online	-0.0252	0.635	-0.0397	0.968
GPA	-2.6745	0.611	-4.3745	< .001
Gender:				
Female – Male	-1.7005	1.033	-1.6454	0.101
Prefer not to say – Male	-11.9252	6.447	-1.8497	0.065

[a] Represents reference level

MODEL FIT MEASURES

Model	R	R²	Adjusted R²	RMSE		F	df1	df2	p
					Overall Model Test				

Descriptives

	Gender
N	346
Missing	3
Mean	1.36
Median	1.00
Standard deviation	0.517
Minimum	1
Maximum	4

Frequencies of Gender

Gender	Counts	% of Total	Cumulative %
Male	224	64.7 %	64.7 %
Female	120	34.7 %	99.4 %
Prefer not to say	2	0.6 %	100.0 %

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Revisiting the Hypotheses

- Hypothesis 1 was confirmed. Participants scored over 50% on each subscale.
- Hypothesis 2 was confirmed, as there was found to be no significant difference in results by gender or race.
- Hypothesis 3 was partially confirmed. There was no difference based marital status, but there was an increase in engagement for students that had children or who were first generation.
- Hypothesis 4 was confirmed as the more time a student worked at a job, the less engaged they were.
- Hypothesis 5 was not confirmed because there was no statistical difference between students that went to college full time and part time.
- Hypothesis 6 was confirmed. The data indicate that as the GPA drops, so does engagement.
- Hypothesis 7 was supported because the difference in engagement between those taking some online classes and those not taking online classes was not significant.
- Hypothesis 8 was confirmed as the data show that highly satisfied people were also highly engaged.
- Hypothesis 9 was partially confirmed. Academic challenges did have a negative impact on engagement. However, financial issues, lack of support/resources, and personal/family reasons had no significant effect on engagement.
- Hypothesis 10 was partially supported. Students planning to complete their degree at the university were more engaged, but those with plans to leave were more engaged.

DISCUSSION

Most students in the sample were in their third year of a four-year program, indicating a strong likelihood that they will graduate. This standing in college has probably impacted engagement results, as many lesser engaged students likely dropped out of college in their first or second year. This is probably true for the first-generation students and others and may be why first-generation status impacts engagement in this study. Perhaps the first-generation students that remain in the third year have overcome the challenges of the lack of family familiarity with higher education by being highly engaged, and this level of engagement continues through graduation. However, the results might be different for a sample of first-year students.

Surprisingly, students with children were significantly more engaged than those without children. This may be the result of a higher level of seriousness for students that are parents who must find a career that will provide for a family rather than just themselves.

Students with higher GPAs were more engaged in their studies, which is predicted. High grades are a reward that encourages further engagement in a virtuous cycle. As predicted, students with high satisfaction with the university were also highly engaged. High levels of engagement might add to the satisfaction with the university, which in turn increases engagement in a virtuous cycle much like high GPAs.

The data show that the modality of classes (online versus live) does not impact engagement. Many students take online classes to meet their needs for flexibility to allow work and other responsibilities, while others find they need live classes to stay engaged. If a student floundered in one type of modality, they may have worked out the mix of class modalities that work best for them by their third year. The results might be different for first year students.

Another surprise was that most barriers students face in degree completion, including financial issues, lack of support or resources, and personal and family reasons, did not impact engagement. Only academic challenges impacted engagement. The reasons for this are unclear, but perhaps financial difficulty makes students feel that the college experience is valuable, and so engagement is maintained. Perhaps university resources intended to support students are sufficient to overcome challenges at home and a lack of student resources.

The university where the students attended is part of a state system of universities with well-established articulation agreements that are required by the state. This makes it very easy for students to take some classes at one state institution and then transfer to another with all their transferred classes counting toward the desired degree. The study predicted that those students with plans to complete their degree at the university would be more engaged, which was confirmed. However, those with plans to leave the university had higher engagement than those who did not. This baffling result may be teasing out a nuance in the first question. Students may not plan to complete their studies at the university either because they plan to transfer to another university, or because they are not confident they will complete any degree. Those who are giving up on completing a degree are likely less engaged. However, those that are planning to transfer to another university, may be anxious to be well prepared for the new institution and are, therefore, more engaged in their studies.

Limitations and Future Research

This study aimed to understand students' self-reported engagement levels based on the established UWES-S scale and determine possible differences in engagement based on student demographic variables. This study was conducted among third-year business students at a large open-enrollment university in the western United States. This does limit the generalizability of the results. Nevertheless, some interesting results could inform future research.

Causal links could be explored for students with children being more engaged. Does having children make students more serious? Does having children force many to drop out of college, leaving only the most engaged? Does having children make engaged students switch to a business major because it might provide more reliable employment to support a growing family?

The increased engagement of first-generation students is another area for further research. First-generation students in their third year of study may be those that are the survivors because of their engagement. Another possible explanation is that first-generation students have more family support because the degree is more highly prized than an expected post-secondary accomplishment in a family with other college graduates.

Another study area could be to understand why barriers related to finances, family, and general support/resources did not impact engagement. Are these factors more impactful among first-year students and is there a winnowing process that leaves only engaged students still attending during their third year?

Future research could correlate these findings of engagement with actual retention rates and with initiatives aimed at increasing engagement. Most educators assume that more engagement leads to higher degree completion rates, but how impactful is that compared to uncontrollable forces (such as health issues)

that can prevent even highly engaged students to drop out? Also, how do these effects vary between first-year and third-year students/

CONCLUSION

Student retention models illustrate the importance of academic engagement, specifically, involvement, integration, and intellectual development (Astin, 1984, 1999; Kirby, 2015; Tinto, 1975, 1986, 1987, 1993). The UWES-S provides insights into student engagement, which can be reviewed based on multiple aspects of students and their experiences. This study confirmed many expected influences on academic engagement including fewer working hours, higher GPAs and higher satisfaction with the university lead to higher engagement. Other factors found no impact include gender, race, marital status, first-generation status, course modality (online or live).

A surprising result was that students with children were more engaged than those without children. This may be due to a greater level of seriousness from starting a family, but further research is needed. Another surprising result was that barriers to completion, including financial issues, lack of support or resources, and personal and family reasons, did not impact engagement. Also, first-generation college students had higher engagement. These results may be due to a winnowing process during the first two years that leaves the most determined students of this group still in college during the third year.

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